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**(54) NONORIENTED SILICON STEEL SHEET EXCELLENT IN CORE LOSS CHARACTERISTICS**

(57)Abstract:

PROBLEM TO BE SOLVED: To produce a nonoriented silicon steel sheet excellent in core loss characteristics even by finish annealing at a low temp. in a short time and magnetic annealing at a low temp. in a short time.

SOLUTION: This nonoriented silicon steel sheet has a compsn. consisting of, by weight, >1 to 3.5% Si, 0.1 to 1% Al, 0.1 to 0.8% Mn,  $\leq 0.05\%$  Cu and  $\leq 0.01\%$  S, and in which the size and the number of inclusions contained therein are regulated to: those having 0.1 to 0.5 $\mu$ m diameter are 500 to 5000 pieces/mm<sup>2</sup> and those having >0.5 $\mu$ m diameter are  $\leq 500$  pieces/mm<sup>2</sup>. Furthermore, the content of C is regulated to  $\leq 0.005\%$ , P to  $\leq 0.2\%$  and N to  $\leq 0.005\%$ .